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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,807	10/20/2003	Zhen Liu	YOR920030498US1	7961

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Intellectual Property Law Dept.  
IBM Corporation  
P.O. Box 218  
Yorktown Heights, NY 10598

EXAMINER
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KHATRI, ANIL

ART UNIT	PAPER NUMBER
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2191

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/21/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/689,807

Applicant(s)

LIU ET AL.

Examiner

Anil Khatri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-22 are rejected under 35 USC 101 because they disclose a claimed invention that is an abstract idea as defined in the case *In re Warmerdam*, 33, F 3d 1354, 31 USPQ 2d 1754 (Fed. Cir. 1994).

*Analysis:* Claims 1-22 disclosed by the applicant as being a “method for building automatically performance...” Since the claims are each a series of steps to be performed on a computer the processes must be analyzed to determine whether they are statutory under 35 USC 101.

Examiner interprets that the claims 1-22 are non-statutory because they do not disclose that how a system will be able to receive and build performance data, transaction flows and inferring service demand parameter based on the received data without incorporating steps for building performance model and incorporating a processor, memory and medium so intended results get executed. Therefore, claims 1-22 lacks tangible results and its functionality cannot be realized. Thus claims 1-22 are non-statutory and rejected under 35 USC 101.

*Analysis:* Claims 12-22 are disclosed by the applicant as being “a computer readable medium...”. Since the claims are each a series of steps to be performed on a computer the processes must be analyzed to determine whether they are statutory under 35 USC 101.

Examiner interprets that claims 12-22 are not limited to tangible embodiments. In view of applicant’s disclosure and specification the medium is not limited to tangible embodiments,

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instead being defined as including both tangible embodiments (e.g., [computer readable medium]) and intangible embodiments. As such, the claim is not limited to statutory subject matter and is therefore non-statutory. To overcome this type of 101 rejection the claims need to be amended to include only the physical computer media and not a transmission media or other intangible or non-functional media. For the specification carrier medium and transmission media would be not statutory but storage media would be statutory.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: sampling, estimating, determining and processing calculation on collected data.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6 and 12-17 are rejected under 35 U.S.C. 102(b) as being anticipated by

*McDonald et al* USPN 5,881,268.

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Regarding claims 1 and 12

*McDonald et al* teaches,

receiving performance data of the system (figures 2-3, column 4, lines 32-55, “operation of a performance modeling...)

receiving data of transaction flows and system topology (figure 6, column 7, lines 56-67, “the topology view...);

inferring service demand parameters based on the received data (figure 3, column 9, lines 48-64, “performance analysis...).

Regarding claims 2 and 13

*McDonald et al* teaches,

step of receiving performance data comprises receiving end-to-end response times of transactions carried out by the system or response times of transactions at the servers composing the system (figures 3 and 12, column 5, lines 26-36, “the performance modeling tool...).

Regarding claims 3 and 14

*McDonald et al* teaches,

the step of receiving performance data comprises receiving server load information (figure 12, column 8, lines 44-58, “the workload view allows...).

Regarding claims 4 and 15

*McDonald et al* teaches,

the step of receiving performance data comprises receiving system throughput measurements (figure 3, column 5, lines 26-36, “the results include...).

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Regarding claims 5 and 16

*McDonald et al* teaches,

step of receiving a transaction flow comprises receiving at least one modeled queue corresponding to at least one component of the system (figures 8-9, column 11, lines 40-57, “a simple banking...between partition”).

Regarding claims 6 and 17

*McDonald et al* teaches,

the step of inferring service demand parameters comprises inferring service times of transactions handled by servers (figure 11, column 11, lines 58-67, “in the topology window...).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-11 and 18-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over *McDonald et al* USPN 5,881,268 is taken with *Ding et al* USPN 6,691,067.

Regarding claims 7 and 18

*McDonald et al* teaches,

performance data. *McDonald et al* doesn't teach explicitly deriving equations for the solving the equations to find at least one value corresponding to service time for a transaction

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handled by a server; and selecting an optimum value of service time. However, *Ding et al* teaches (figures 8-18, 21-23, column 11, lines 33-67, “after the baseline model...”, column 12, lines 10-44, “performance measurement...performance tool). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to incorporate equation for calculating performance data. The modification would have been obvious because one of ordinary skill in the art would have been motivated to combine teaching into processing system’s performance and finding servicing time and optimum value by each node in the multi processing environment.

Regarding claims 8 and 19

*McDonald et al* teaches,

computing performance data for the transaction flow model using each of value(figures 8-9, column 11, lines 40-57, “a simple banking...between partition”). *McDonald et al* doesn’t teach explicitly comparing the computed performance data with the received performance data; and selecting the value of service time corresponding to the computed performance being closest to the measured performance data. However, *Ding et al* teaches (column 13, lines 18-38, “performance data is collected...unit of execution”) and (figure 12, column 15, lines 9-45, “in step of 738 the measurement...measurement interval”).

Regarding claims 9 and 20

*Ding et al* teaches,

creating a stochastic model of the system (figures 7-8, 11-18, column 7, lines 7-15, “the predict component...);

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obtaining from the stochastic model at least one value corresponding to service time for a transaction handled by a server (figure 21 , column 12, lines 45-67, “sensitivity to sampling... such a metric”); and

searching for an optimum value of service time (column 11, lines 54-67, and column 12, lines 1-4).

Regarding claims 10 and 21

*Ding et al* teaches,

the searching step comprises applying a meta-heuristic search to the stochastic model of the system (column 14, lines 57-67, “for a computer system...).

Regarding claims 11 and 22

*McDonald et al* teaches,

The searching step comprises applying an annealing algorithm to the stochastic model of the system (column 14, lines 15-24, “utilization analysis...).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anil Khatri whose telephone number is 571-272-3725. The examiner can normally be reached on M-F 8:30-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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ANIL KHATRI  
PRIMARY EXAMINER